REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

The spelling errors in claims 32 and 50 have been corrected.

The amendments made to the independent claims clarify that the first type of polling allows the user equipment to chose whether to transmit a data packet to the base station in response to receiving polling of a first type but requires the user equipment to transmit a data packet of some kind to the base station in response to receiving polling of a second type. The amendments to the independent claims are not intended to be narrowing amendments.

Claims 30-58 stand rejected under 35 USC §103(e) as being anticipated by U.S. 2004/0196861 to Rinchiuso. This rejection is respectfully traversed.

The technology in this application relates to polling of user equipment in packet-based data communication systems. Some mobile communication systems permit pre-reservation of uplink radio resources in order to reduce the latency or round trip time (RTT) of the system. For example, the extended uplink temporary block flow (UL_TBF) enables this pre-reservation of uplink radio resources in 3GPP_R4 which permits the RTT to be reduced from about 450 milliseconds (prior to 3GPP_R4) to about 200 milliseconds (with extended uplink temporary block flow). But a problem with UL_TBF and the pre-reservation of radio resources is that in order to maintain the pre-reserved resource, the mobile terminal must transmit an extensive amount of data. The data transmission is mandatory regardless of whether the mobile terminal has any user data to send. This leads to transmission of large amounts of "dummy data" on the uplink. There is also a high price to pay in terms of battery time in the mobile terminal as well as interference resulting in reduced network capacity. In the non-limiting example described in the background section of this application, reducing the RTT from 450 milliseconds to 200

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milliseconds may reduce the mobile terminal's battery time by more than 50 percent and increase the uplink interference in a GPRS system from a GPRS mobile terminal by more than a 100 percent.

The technology described in the independent claims separates the pre-reservation of a shared uplink radio resource from presence check polling using two different types of polling from the base station. In the first type of polling, it is optional for the mobile terminal to respond, and if it responds, it does so by transmitting a user data packet when there is one available. For the second of type of polling, it is mandatory for the mobile terminal to respond even if there is no user data packet to transmit. As recited in dependent claims, in the second type of polling, the mobile terminal transmits one or more dummy packets if no user data packets are available to transmit in response to the second type of polling.

The Rinchiuso references describes temporary block flows to transfer data packets in a GPRS system where the data channel remains active with multiple users sharing access to the channel. Normally, when a data transmission ceases, a base station terminates the TBF by setting a final block indicator bit (FBI) to 0. But in Rinchiuso's patent application, a transmitting entity holds to the TBF for an extended delay period in order to "obtain measurement data from the mobile and give the mobile opportunities to establish an uplink TBF." See [0051]. To accomplish this, "dummy radio link control (RLC) data will be at least occasionally transmitted by the network during the time period that the network is holding the downlink TBF. During delayed release of an uplink TBF, the mobile is requested to occasionally transmit uplink blocks during the time period that the network is holding the uplink TBF. This time period allows the network to establish a downlink TBF and/or provides the mobile an opportunity to extend the uplink TBF without establishing another uplink TBF." *Id.*

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The Examiner alleges that Rinchiuso teaches the claimed two different types of polling and relies on paragraphs [0022], [0056], and [0057]. As a point of clarification regarding paragraph [0022], Applicants point out that the text in this paragraph does not illustrate that polling can be performed from a remote unit to a base station in a "similar manner," as the Examiner suggests. Instead, paragraph [0022] explains that "data transmission" may take place in a "similar manner." To the extent that the Examiner equates the claimed "first type of polling" with the "paging" described in [0025], this paragraph specifically states that paging is "for notification of any pending transmissions by [the] base station" and "indicating pending downlink transmissions," i.e., data transmission following paging occurs in the downlink from the paging. In contrast, the user equipment in the claims chooses whether to transmit a data packet in response to a first type of polling, i.e., the data transmission is optional and occurs in the uplink direction from the mobile terminal to the base station.

Regarding Figures 11 and 12 which are described in paragraphs [0056] and [0057], respectively, both of the signaling diagrams in these two figures require that the mobile terminal transmit dummy uplink control (at blocks 1104 in Figure 11 and at 1204 in Figure 12) in response to the transmission of a last data block from the mobile terminal to the network and the network responding with a "PACKET UPLINK ACK/NACK WITH FINAL _ACK_INDICATOR = 0." Paragraph [0056] states "the base station will periodically give the remote unit a chance to transmit data and if the remote unit has no data, then the remote unit sends a dummy control block 104" (emphasis added). Similarly, paragraph [0057] states "the base station will periodically give the remote unit a chance to transmit data and if the remote unit has no data then the remote unit sends a dummy control block 1204, otherwise the remote unit transmits data block 1205" (emphasis added). Accordingly, Rinchiuso fails to disclose all the
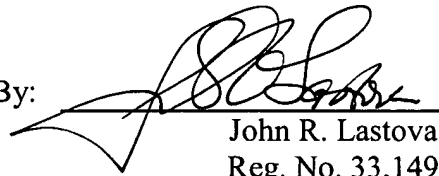
features of the independent claims which require that the first type of polling allows the user equipment to "choose whether or not to transmit a data packet to the base station in response to reception of polling of the first type." The sections of text in Rinchiuso relied upon by the Examiner requires the user equipment to always transmit either a dummy packet or data blocks in response to reception of a polling message. The user equipment does not have the option of not sending some sort of data packet in response to polling.

The application in condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

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